



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,309	12/31/2003	Nagesh K. Vodrahalli	ITS.0008US (P17998)	8796
21906	7590	11/02/2005	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024				STAHL, MICHAEL J
ART UNIT		PAPER NUMBER		
		2874		

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/751,309	VODRAHALLI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mike Stahl	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4, 12-16 and 21-25 is/are rejected.
- 7) Claim(s) 5-11, 17-20 and 24 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 December 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. ____ .   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____ .                                   |

***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: There does not appear to be support for claim 25 in the specification. Applicant is required to either demonstrate how the present specification provides adequate support for claim 25, or amend the specification to support claim 25, or cancel claim 25.

***Claim Objections***

Claim 24 is objected to because “may be” should be changed to “is”.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 12, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Blauvelt et al. (US 2005/0078913).

Blauvelt discloses the recited method or optical system at fig. 10A and the associated description ([0041]-[0042]).

Claims 1-3 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura. (US 6760510).

Kimura discloses the recited method or optical system at fig. 14 and the associated description (col. 15). Light emitting device 73 is typically a laser diode as indicated at col. 10 lns. 2-3.

Claims 21, 22, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Fan et al. (US 6495813).

Claim 21: Fan discloses a photodetector comprising: an L-shaped body 34 (fig. 4a) or 39 (fig. 4b); and an optical reflector (a color filter shown in figs. 5-6) on one surface of the body to reflect one wavelength and to transmit another wavelength.

Claims 22 and 25: The reflector includes at least two layers on the surface (e.g. layers 54 and 56 in fig. 6a). One layer filters out one wavelength and one layer reflects another wavelength.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura (cited above).

As to claims 4 and 16, Kimura does not show a detector integrated with a reflector, i.e. the reflector **86** and detector **88** of fig. 14 are depicted as separate elements. Detectors with integral reflectors are known in the art. It would have been obvious to a skilled person making the Kimura device to have integrated the detector **88** and the reflector **86** since this would reduce the size of the device and would reduce optical losses by eliminating the air interface between the opposed surfaces of filter **86** and detector **88**.

As to claim 15, Kimura does not disclose a power monitor coupled to the other end of curved waveguide **74**. Power monitors are already known in the art per se. It would have been obvious to a skilled person to have coupled a power monitor to the other end of the curved waveguide in order to verify that the optical power in the device is at an acceptable level.

Claims 21, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langley (US 6487087).

Claim 21: Langley discloses a photodetector including an L-shaped body, but does not disclose an optical reflector on one surface of the body to reflect one wavelength and to transmit another wavelength. Official notice is taken of the fact that it is well known to include such reflectors in photodetectors so that the photodetector will receive only a desired wavelength. It would have been obvious to a skilled person to have provided such a reflector on the Langley device since this would enable the device to be used in conventional wavelength division multiplexed optical communication systems.

Claim 23: The photodetector includes two portions arranged at approximately 90 degrees to one another, each portion being formed of multilayer packages.

Claim 24: The L-shaped body may be formed of a multilayer package and a lead frame if so chosen by the manufacturer.

***Allowable Subject Matter***

Claims 5-11 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5 and 17 each require an L-shaped detector. Kimura is the only reference applied to respective parent claims 4 and 16. That reference fails to disclose or suggest using a detector having that particular shape. There is no apparent motivation to combine any of the other cited references having L-shaped detectors with the Kimura reference to achieve the inventions of claims 5 or 17. Claims 6-11 and 18-20 depend from claims 5 and 17 respectively.

***Conclusion***

The unapplied references cited on the attached PTO-892 form are considered pertinent to this application.

Inquiries about this letter should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at 571-272-1626. Official communications which are eligible for submission by facsimile and which pertain to this application may be faxed to 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJS

Mike Stahl  
Patent Examiner  
Art Unit 2874

October 30, 2005



Sung Park  
Primary Examiner  
AU 2874